PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method for detecting speech activity for a signal, the method comprising the steps of:

extracting a plurality of features from ~~the~~ **a digitized** signal, **wherein:**

the plurality of features alone cannot recreate the digitized signal, and

the digitized signal is a digital representation of the signal;

modeling a first and a second probability density functions (PDFs) of the plurality of features, wherein:

the first PDF models active speech **features** ~~conditions~~ for the **digitized** signal, and

the second PDF models inactive speech **features** ~~conditions~~ for the **digitized** signal;

adapting the first and second PDFs to respond to changes in the **digitized** signal over time;

probability-based classifying of the **digitized** signal based, at least in part, on the plurality of features; and

distinguishing speech in the **digitized** signal based, at least in part, upon the probability-based classifying step.

2.   (Original)   The method for detecting speech activity for the signal as recited in claim 1, wherein the probability-based classifying step uses the first and second PDFs.

3.   (Currently Amended) The method for detecting speech activity for the signal as recited in claim 1, wherein the modeling step comprises a step of determining a mathematical model for the **digitized** signal from the plurality of features.

4.   (Original)   The method for detecting speech activity for the signal as recited in claim 1, wherein the adapting step comprises a step of increasing a likelihood.

5.   (Currently Amended)   The method for detecting speech activity for the signal as recited in claim 1, wherein the adapting step comprises a step of identifying extreme values in a **plurality of** l̶o̶n̶g̶-̶s̶e̶q̶u̶e̶n̶c̶e̶ ̶o̶f̶ previous frames.

6.   (Original)   The method for detecting speech activity for the signal as recited in claim 1, wherein the probability-based classifying step comprises a step of classifying based on likelihood ratio detection.

7.   (Original)   The method for detecting speech activity for the signal as recited in claim 1, wherein the probability-based classifying step comprises applying a log-likelihood ratio test to one of the plurality of features.

8.   (Currently Amended) The method for detecting speech activity for the signal as recited in claim 1, wherein at least one of the first **or** a̶n̶d̶ second PDFs comprises a Gaussian mixture model.

9.   (Currently Amended) The method for detecting speech activity for the signal as recited in claim 1, wherein at least one of the first **or** a̶n̶d̶ second PDFs uses a non-Gaussian model.

10.   (Currently Amended) The method for detecting speech activity for the signal as recited in claim 1, wherein at least one of the first **or** a̶n̶d̶ second PDFs comprises a plurality of basic density models.

11.   (Currently Amended) The method for detecting speech activity for the signal as recited in claim 1, wherein at least one of the plurality of features is related to power in a spectral band of the **digitized** signal.

12.   (Original)   The method for detecting speech activity for the signal as recited in claim 1, further comprising a step of smoothing an activity decision for hangover periods to produce a smoothed activity decision.

13.   (Original)   A computer-readable medium having computer-executable instructions for performing the computer-implementable method for detecting speech activity for the signal of claim 1.

14.   (Currently Amended) A method for detecting sound activity for a signal, the method comprising the steps of:

extracting a plurality of features from ~~the~~ **a digitized** signal**, wherein:**

the plurality of features do not fully represent the digitized signal, and the digitized signal is a digital representation of the signal;

modeling an active ~~speech~~ **sound** probability density function (PDF) of the plurality of features;

modeling an inactive ~~speech~~ **sound** PDF of the plurality of features;

adapting the active and inactive ~~speech~~ **sound** PDFs to respond to changes in the **digitized** signal over time;

probability-based classifying of the **digitized** signal based, at least in part, on the plurality of features; and

distinguishing ~~speech~~ **sound** in the **digitized** signal based, at least in part, upon the probability-based classifying step.

15.   (Original)   The method for detecting sound activity for the signal as recited in claim 14, wherein the probability-based classifying step uses the active and inactive speech PDFs.

16.   (Original)   The method for detecting sound activity for the signal as recited in claim 14, wherein the adapting step comprises a step of increasing a likelihood.

PATENT

17.   (Currently Amended) The method for detecting sound activity for the signal as recited in claim 14, wherein at least one of the active **or** ~~and~~ inactive ~~speech~~ **sound** PDFs uses a non-Gaussian model.

18.   (Original)   A computer-readable medium having computer-executable instructions for performing the computer-implementable method for detecting sound activity for the signal of claim 14.

19.   (Currently Amended) A method for detecting ~~sound~~ **speech** activity for a signal, the method comprising the steps of:

extracting a plurality of features from ~~the~~ **a digitized** signal**, wherein:**

the plurality of features do not map one to one with the digitized

signal, and

the digitized signal is a digital representation of the signal;

modeling an active speech probability density function (PDF) of the plurality of features;

modeling an inactive speech PDF of the plurality of features, wherein at least one of the active **or** ~~and~~ inactive speech PDFs uses a non-Gaussian model;

adapting the active and inactive speech PDFs to respond to changes in the **digitized** signal over time;

probability-based classifying of the **digitized** signal based, at least in part, the active and inactive speech PDFs; and

distinguishing speech in the **digitized** signal based, at least in part, upon the probability-based classifying step.

20.   (Currently Amended) The method for detecting ~~sound~~ **speech** activity for the signal as recited in claim 19, wherein both the active and inactive speech PDFs use a non-Gaussian model.

21.   (Currently Amended) A computer-readable medium having computer-executable instructions for performing the computer-implementable method for detecting ~~sound~~ **speech** activity for the signal of claim 19.